



U.S. Department of Energy
Office of Environmental Protection
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

0074006

SEP 26 2007

07-ESQ-164

Ms. Jane A. Hedges, Program Manager
Nuclear Waste Program
Washington State
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

RECEIVED
SEP 28 2007
EDMC

Dear Ms. Hedges:

SUBMITTAL OF HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY
ACT (RCRA) PERMIT MODIFICATION NOTIFICATION FORM 24590-LAW-PCN-ENV-
07-006

- References:
1. BNI letter from W. S. Elkins to S. J. Olinger, ORP, "Submittal of Hanford Facility Resource Conservation and Recovery Act Permit Modification Notification Form 24590-LAW-PCN-ENV-07-006," CCN: 161106, dated August 22, 2007.
 2. WA7890008967, "Dangerous Waste Portion of the Hanford Facility Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Part III, Operating Unit 10, 'Waste Treatment and Immobilization Plant.'"

This letter transmits Hanford Facility RCRA Permit Modification Notification Form 24590-LAW-PCN-ENV-07-006 for the Washington State Department of Ecology (Ecology) review and approval. The form describes a requested Class 1 modification to the Reference.

Permit Modification Notification Form 24590-LAW-PCN-ENV-07-006 updates the integrity assessment for the Low-Activity Waste (LAW) Secondary Offgas/Vessel Vent Process (LVP) System, Caustic Collection Tank (LVP-TK-00001), located in Room L-0218, at Elevation 28 ft. 0 in. of the LAW Vitrification Building in Appendix 9.11 of Reference 2.

Ecology was provided an opportunity to review the modification notification form and the associated information and comments were dispositioned.

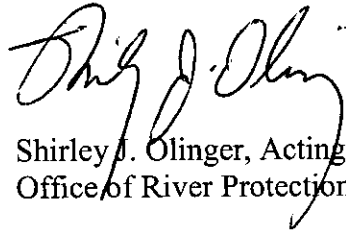
Ms. Jane A. Hedges
07-ESQ-164

-2-

SEP 26 2007

If you have any questions, please contact me, or your staff may contact Lori A. Huffman, Office of Environmental Safety and Quality, (509) 376-0104.

Sincerely,



Shirley J. Olinger, Acting Manager
Office of River Protection

ESQ:LAH

Attachment

cc w/attach:

Administrative Record *H-0-8*
BNI Correspondence
Environmental Portal, LMSI

cc electronic:

W. S. Elkins, BNI
B. G. Erlandson, BNI
P. A. Fisher, BNI
J. S. Hill, BNI
S. Murdock, BNI
P. Peistrup, BNI
D. Robertson, BNI
B. Becker-Khaleel, Ecology (1 hard copy)
E. A. Fredenburg, Ecology
T. Gao, Ecology
A. A. Hamar, Ecology
S. A. Thompson, FHI
A. C. McKarns, RL
D. J. Sommer, SCS

cc w/o attach:

D. A. Klein, BNI
J. Cox, CTUIR
S. Harris, CTUIR
S. L. Dahl, Ecology
G. P. Davis, Ecology
G. Bohnee, NPT
K. Niles, Oregon Energy
R. Jim, YN

Attachment
07-ESQ-164

Hanford Facility RCRA Permit Modification Notification
Form 24590-LAW-PCN-ENV-07-006

Quarter Ending September 30,
2007

24590-LAW-PCN-ENV-07-006

Hanford Facility RCRA Permit Modification Notification Form**Part III, Operating Unit 10****Waste Treatment and Immobilization Plant**

Index

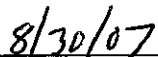
Page 2 of 2: Hanford Facility RCRA Permit, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant

Update the integrity assessment for the LAW Secondary Off-gas/Vessel Vent Process (LVP) System, Caustic Collection Tank (LVP-TK-00001), located in room L-0218, at Elevation 28'-0" of the LAW Vitrification Building in Appendix 9.11 of the Dangerous Waste Permit.

Submitted by Co-Operator:



D. A. Klein

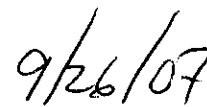


Date

Reviewed by ORP Program Office:



S. J. Olinger



Date

Quarter Ending September 30,
2007

24590-LAW-PCN-ENV-07-006

Hanford Facility RCRA Permit Modification Notification Form								
Unit: Waste Treatment and Immobilization Plant		Permit Part & Chapter: Part III, Operating Unit 10						
Description of Modification: The purpose of this Class 1 prime modification is to update the Integrity Assessment of the LAW Secondary Off-gas/Vessel Vent Process (LVP) System, Caustic Collection Tank (LVP-TK-00001), located in room L-0218, at Elevation 28'-0" of the LAW Vitrification Building. The following document is submitted to replace the document currently in Appendix 9.11.								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 2px;">Appendix 9.11</td> </tr> <tr> <td style="width: 50%; padding: 2px;">Replace: 24590-CM-HC4-HXYG-00138-02-00038, Rev. 0</td> <td style="width: 50%; padding: 2px;">With: AREVA-IA-101, Rev.0</td> </tr> </table>					Appendix 9.11		Replace: 24590-CM-HC4-HXYG-00138-02-00038, Rev. 0	With: AREVA-IA-101, Rev.0
Appendix 9.11								
Replace: 24590-CM-HC4-HXYG-00138-02-00038, Rev. 0	With: AREVA-IA-101, Rev.0							
This modification requests Ecology approval and incorporation into the permit the above mentioned integrity assessment report. The report has been updated by the Independent Qualified Registered Professional Engineer (IQRPE). The report reflects the IQRPE's review of the following final design documents: <ul style="list-style-type: none"> • Mechanical Data Sheet, Facility and Vendor Fabrication Drawings, Specifications, and Material Requisitions produced in accordance with the following Reference: <ul style="list-style-type: none"> ◦ API-650 Standard, American Petroleum Institute, Welded Steel Tanks for Oil Storage • 24590-CM-POA-MVA0-00019-02-00002, Rev. 00C, Design Calculations for LAW Caustic Collection Tank (LVP-TK-00001) • 24590-WTP-DB-ENG-01-001, Rev. 1I, Basis of Design • 24590-LAW-N1D-LVP-00002, Rev. 2, Corrosion Evaluation - Caustic Collection Tank LVP-TK-00001 (LAW) • 24590-WTP-PER-PR-03-002, Rev. 2, Toxic Vapors and Emissions from WTP Tank Systems and Miscellaneous Treatment Unit Systems; • 24590-WTP-PER-PR-03-001, Rev. 1, Prevention of Hydrogen Accumulation in WTP Tank Systems and Miscellaneous Treatment Unit Systems. 								
For each item of "Information Assessed" in the integrity assessment report, the items listed under the "Source of Information" column were reviewed and found to furnish adequate design controls and requirements to ensure the design fully satisfies the requirements of Washington Administrative Code, WAC-173-303-640; <i>Dangerous Waste Regulations for Tank Systems</i> .								
WAC 173-303-830 Modification Class: ^{1 2}		Class 1	Class ¹ 1	Class 2	Class 3			
Please mark the Modification Class:			X					
Enter Relevant WAC 173-303-830, Appendix I Modification citation number: NA Enter wording of WAC 173-303-830, Appendix I Modification citation: In accordance with WAC 173-303-830(4)(d)(i), this modification notification is requested to be reviewed and approved as a Class ¹ 1 modification. WAC 173-303-830(4)(d)(ii)(A) states, "Class 1 modifications apply to minor changes that keep the permit current with routine changes to facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of Class 1 modifications, the director may require prior approval."								
Modification Approved: <input type="checkbox"/> Yes <input type="checkbox"/> No (state reason for denial) <u>Reason for denial:</u> <div style="border: 1px solid black; height: 40px; width: 100%; margin-top: 5px;"></div>			Reviewed by Ecology: <div style="display: flex; justify-content: space-between; border-top: 1px solid black; padding-top: 5px;"> B. Becker-Khaleel Date </div>					

¹ Class 1 modifications requiring prior Agency approval.

² If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class ¹1, if applicable.

RPP-WTP
RECEIVED
AUG 15 2007
BY PDC



AREVA-07-080

Ms. Anne Weldon
Subcontracts
Bechtel National, Inc.
2435 Stevens Center Place
Richland, Washington 99354

August 14, 2007

Dear Ms. Weldon:

**BECHTEL NATIONAL, INC. CONTRACT NO. 24590-CM-HC4-HXYG-00211 -
STRUCTURAL INTEGRITY ASSESSMENT OF LOW-ACTIVITY WASTE (LAW)
SECONDARY OFFGAS SYSTEM (LVP) CAUSTIC COLLECTION TANK (LVP-TK-00001)
(AREVA-IA-101, REV. 0)**

The integrity assessment of the subject tank has been completed per the contract requirements and is enclosed for your use. The assessment found that the design is sufficient to ensure that the tank is adequately designed and has sufficient structural strength, compatibility with the waste(s) to be processed/stored/treated, and corrosion protection to ensure that it will not collapse, rupture, or fail.

If you have any questions, please contact Tarlok Hundal at (509) 373-4438, or via email at tarlok.hundal@areva.com.

Sincerely,

M. D. Rickenbach, Director
Engineering & Services
AREVA NC Inc.
Richland

Ilm

Enclosure

cc: D. C. Pfluger MS 5-L w/ enclosure (2)

AREVA NC INC.

**STRUCTURAL INTEGRITY ASSESSMENT
OF
LOW-ACTIVITY WASTE (LAW) SECONDARY OFFGAS SYSTEM (LVP)
CAUSTIC COLLECTION TANK (LVP-TK-00001)**

Please note that source, special nuclear and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA), are regulated at the U.S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts, that pursuant to the AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

**IQRPE REVIEW
OF
LOW-ACTIVITY WASTE (LAW) SECONDARY OFFGAS SYSTEM (LVP)
CAUSTIC COLLECTION TANK (LVP-TK-00001)**

"I, Tarlok Hundal have reviewed, and certified a portion of the design of a new tank system or component located at the Hanford Waste Treatment Plant, owned/operated by Department of Energy, Office of River Protection, Richland, Washington. My duties were independent review of the current design for the Low-Activity Waste (LAW) Secondary Offgas System (LVP) Caustic Collection Tank (LVP-TK-00001) as required by the Washington Administrative Code, *Dangerous Waste Regulations*, Section WAC-173-303-640(3) (a) through (g) applicable components."

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

The documentation reviewed indicates that the design fully satisfies the requirements of the WAC.

The attached review is six (6) pages numbered one (1) through six (6).



EXPIRES: 02/15/08

T. Hundal
Signature

8/14/07
Date

**Low-Activity Waste (LAW) Secondary Offgas System (LVP)
Caustic Collection Tank (LVP-TK-00001)**

AREVA-IA-101, Rev. 0

Scope	Scope of this Integrity Assessment	This Integrity Assessment is for LAW Secondary Offgas/Vessel Vent Process (LVP) System, Caustic Collection Tank (LVP-TK-00001), located in room L-0218, at Elevation 28'-0" of the LAW Vitrification Building.
References	Material Requisition, Specifications, Drawings and Mechanical Data Sheet.	<p><u>Material Requisition:</u> 24590-CM-MRC-MVA0-00002, Rev. 1(including Supplements S0001 and S0002): Pressure Vessels, Shop Fabricated, Medium (N053).</p> <p><u>Specifications:</u> The following Specifications with their respective revision and Specification Change Notices (SCNs) are listed in the above listed Material Requisition: 24590-WTP-3PS-G000-T0001, General Specification for Supplier Quality Assurance Program Requirements; 24590-WTP-3PS-G000-T0002, Engineering Specification for Positive Material Identification (PMI) for Shop Fabrication; 24590-WTP-3PS-G000-T0003, General Specification for Packaging, Handling, and Storage Requirements; 24590-WTP-3PS-MV00-T0002, Engineering Specification for Seismic Qualification Criteria for Pressure Vessels; 24590-WTP-3PS-FB01-T0001, Engineering Specification for Structural Design Loads for Seismic Category III & IV Equipment and Tanks; 24590-WTP-3PS-AFPS-T0001, Engineering Specification for Shop Applied Protective Coatings for Steel Items and Equipment; 24590-WTP-3PS-MTSS-T0001, Specification for Tank Welding.</p> <p><u>Plant Drawings:</u> 24590-LAW-P1-P01T-00002, Rev. 5, LAW Vitrification Building General Arrangement Plan at El. 3'-0"; 24590-LAW-P1-P01T-00004, Rev. 3, LAW Vitrification Building General Arrangement Plan at El. 28'-0"; 24590-LAW-P1-P01T-00009, Rev. 8, LAW Vitrification Building General Arrangement Section G-G, H-H, and J-J; 24590-LAW-M5-V17T-00011, Rev. 5, Process Flow Diagram LAW VIT Secondary Offgas Treatment (System LVP); 24590-LAW-M6-LVP-00002, Rev. 3, P & ID-LAW Secondary Offgas/Vessel Vent Process System and Stack Discharge Monitoring System (Including DCN # 24590-LAW-M6N-LVP-00038 to Rev. 3)</p> <p><u>Vender Fabrication Drawings</u> (Bechtel Code 1 Drawings = As-Built Drawings: Approved and Accepted by Bechtel): 24590-CM-POA-MVA0-00019-03-00003, Rev. 00C, LAW Caustic Collection Tank (LVP-TK-00001) General Arrangement; 24590-CM-POA-MVA0-00019-03-00015, Rev. 00A, LAW Caustic Collection Tank (LVP-TK-00001) General Notes.</p> <p><u>Mechanical Data Sheet:</u> 24590-LAW-MTD-LVP-00001, Rev. 0, LAW Caustic Collection Tank (LVP-TK-00001).</p>
	Summary of Assessment	For each item of "Information Assessed" (i.e., Criteria) on the following pages, the items listed under "Source of Information" were reviewed and found to furnish adequate design controls and requirements to ensure that the design fully satisfies the requirements of Washington Administrative Code, WAC-173-303-640, <i>Dangerous Waste Regulations</i> for Tank Systems.

Information Assessed		Source of Information	Assessment
Design	Tank design standards are appropriate and adequate for the tank's intended use.	<p>Mechanical Data Sheet, Specifications, and Drawings listed above under References;</p> <p>API-650 Standard, American Petroleum Institute, Welded Steel Tanks for Oil Storage.</p>	<p>The Mechanical Data Sheet requires that the LAW Caustic Collection Tank, LVP-TK-00001 be designed to the API-650 Standard's applicable requirements, which are appropriate for the tank operating with waste liquid within the pressure and temperature ranges specified for this tank. The tank's quality level is commercial (CM) grade and its seismic category (SC) is SC-III. Supplementary requirements are specified in the engineering Specifications. Supplementary requirements address the tank design, positive material identification, lifting attachment design, fabrication tolerances, acceptable welding procedures for the tank, welder qualifications and testing records, NDE inspections and records, and lifting, packaging, shipping, handling and storage requirements. As discussed above, the design standards are appropriate and adequate for the tank's intended use. As shown on the drawings, the LAW Caustic Collection Tank, LVP-TK-00001 is a vertical tank with a 13 ft ID and a height of 14 ft 4 in. with a self supporting cone roof. The cone roof is built with a 1/4" minimum thick plate. The shell and bottom floor are built of 5/16" minimum thick plates. The tank is anchored to the concrete floor at Elev. 28'-0". Material for the tank's cone roof, shell, and bottom floor is SA-240 316 stainless steel (0.030% maximum carbon content, dual certified), hereafter referred to as 316 stainless steel. The tank has internal piping, spray nozzle, and other appurtenances made of other grades of stainless steel material. Tank's operating volume is to be about 11,910 gallons and the total internal volume is to be about 14,230 gallons.</p>
	If a non-standard tank is to be used, the design calculations demonstrate sound engineering principles of construction.	<p>Mechanical Data Sheet, Specifications, Material Requisition, and Drawings listed above under References;</p> <p>API-650 Standard, American Petroleum Institute, Welded Steel Tanks for Oil Storage; 24590-CM-POA-MVA0-00019-02-00002, Rev. 00C, Design Calculations for LAW Caustic Collection Tank (LVP-TK-00001).</p>	<p>The LAW Caustic Collection Tank, LVP-TK-00001 is a standard API-650 tank. The Mechanical Data Sheet requires that the API-650 tank be delivered after design, fabrication, inspection, and testing per API-650 Standard. This is a shop fabricated tank that is delivered for service in the LAW Facility. Review of the Design Calculations document for this tank shows that it has been designed as a standard tank per applicable requirements of API-650 standard and Specifications and other documents listed in the Material Requisition for the tank. The aforementioned statements and the vendor fabrication drawings of the tank reviewed demonstrate that sound engineering principles of design, construction, and fabrication have been used for the tank.</p>

Information Assessed		Source of Information	Assessment
Design (cont'd)	Tank has adequate strength, after consideration of the corrosion allowance, to withstand the operating pressure, operating temperature, and seismic loads.	<p>Mechanical Data Sheet , Specifications, Drawings, and Material Requisition listed above under References;</p> <p>API-650 Standard, American Petroleum Institute, Welded Steel Tanks for Oil Storage; UBC 1997, Uniform Building Code, International Conference of Building Officials; 24590-CM-POA-MVA0-00019-02-00002, Rev. 00C, Design Calculations for LAW Caustic Collection Tank (LVP-TK-00001).</p>	<p>The Mechanical Data Sheet identifies tank's operating pressure and temperature ranges, the selected materials, the corrosion allowance, the quality level, and the seismic category. The API-650 Standard and supplement Engineering Specifications for the tank require specific consideration of the operating pressures, temperatures, and seismic loads in the design process. API-650 Standard requires that corrosion allowance thickness be added to the nominal tank design thickness when evaluating the adequacy of the tank components for these loads at the end of life. The Mechanical Data Sheet identifies the tank's Seismic Category as SC-III. For SC-III tanks, the detailed requirements for seismic load determination (per UBC 1997) are furnished in the Specification for Structural Design Loads for Seismic Category III & IV Equipment and Tanks. Review of the Design Calculations document of this tank shows that the tank has adequate strength after consideration of corrosion allowance to withstand the applicable operating pressure, temperature, and seismic loads for the specified design life of the tank. Furthermore, approval and acceptance of the vendor fabrication drawings by Bechtel National Inc. (BNI) is an added assurance that all applicable requirements stated above and as described in the documents (including daughter documents) listed in Material Requisition for the tank have been met.</p>
Foundation	Tank foundation will maintain the load of a full tank.	<p>API-650 Standard, American Petroleum Institute, Welded Steel Tanks for Oil Storage; 24590-CM-POA-MVA0-00019-02-00002, Rev. 00C, Design Calculations for LAW Caustic Collection Tank (LVP-TK-00001). 24590-WTP-DB-ENG-01-001, Rev. 1I, Basis of Design.</p>	<p>The API-650 Standard specifies the requirements for the design of the tank supports and ensures their adequate design. Review of the Design Calculations document of the tank shows that the tank's support components (shell and bottom plate) have adequate strength to maintain the load of the full tank. Furthermore, Chapter 14 of the Basis of Design document requires that the foundation underlying the tank support must be adequate to support the loads from full tank, which is out of scope of this assessment. The assessment of the adequacy of the underlying foundation is part of a separate integrity assessment report for the Secondary Containment of the tank.</p>

Information Assessed		Source of Information	Assessment
Foundation (cont'd)	If in an area subject to flooding, the tank is anchored.	<p>Drawings listed under References;</p> <p>24590-LAW-3YD-LOP-00001, Rev. 1, System Description for LAW Primary Offgas Process (LOP) and LAW Secondary Offgas/Vessel Vent Process (LVP) Systems (including SDCN 24590-LAW-3YN-LOP-00006);</p> <p>24590-CM-POA-MVA0-00019-02-00002, Rev. 00C, Design Calculations for LAW Caustic Collection Tank (LVP-TK-00001).</p>	<p>The drawings show and the System Description document states that the tank overflows to the berm around the tank and the berm in turn drains thru a floor drain to the Plant Wash Tank (RLD-VSL-00003) located at the lower floor (Elev. 3'-0"), therefore, flooding is not a credible event. However, the Design Calculations and drawings show that the tank is anchored to the concrete floor.</p>
	Tank system will withstand the effects of frost heave.	<p>Drawings listed under References;</p> <p>24590-WTP-DC-ST-01-001, Rev. 11, Structural Design Criteria.</p>	<p>The Structural Design Criteria requires that all outdoor structural foundations shall extend into the surrounding soil below the 30 in. frost line depth; to preclude any frost heave effects. As shown on the drawings, the tank is located inside/interior of the building at above grade (at floor Elev. 28'-0") and the building's lower level floor is at Elevation (-) 21'-0", therefore, tank's foundation is not subject to the frost heave effects.</p>

**Low-Activity Waste (LAW) Secondary Offgas System (LVP)
Caustic Collection Tank (LVP-TK-00001)**

AREVA-IA-101, Rev. 0

Information Assessed		Source of Information	Assessment
Waste Characteristics	Characteristics of the waste to be stored or treated have been identified (ignitable, reactive, toxic, specific gravity, vapor pressure, flash point, storage temperature)	<p>Mechanical Data Sheet listed above under References;</p> <p>24590-LAW-N1D-LVP-00002, Rev. 2, Corrosion Evaluation - Caustic Collection Tank LVP-TK-00001 (LAW);</p> <p>24590-WTP-PER-PR-03-002, Rev. 2, Toxic Vapors and Emissions from WTP Tank Systems and Miscellaneous Treatment Unit Systems;</p> <p>24590-WTP-PER-PR-03-001, Rev. 1, Prevention of Hydrogen Accumulation in WTP Tank Systems and Miscellaneous Treatment Unit Systems.</p>	The Mechanical Data Sheet presents process conditions and design parameters of the tank, such as the waste specific gravity, temperatures, and pressures, etc. The Corrosion Evaluation document addresses the pH range and chemical composition of the waste and selects appropriate tank materials and the corrosion allowance. Waste characteristics that are hazardous, such as ignitability, reactivity, and toxicity are appropriately addressed in the Toxic Vapors and Emissions document and Prevention of Hydrogen Accumulation document. These two aforementioned documents do not specifically list this tank to exhibit any hazardous characteristics. Additionally the tank is grounded to control ignition sources.
	Tank is designed to store or treat the wastes with the characteristics defined above and any treatment reagents.	<p>24590-LAW-N1D-LVP-00002, Rev. 2, Corrosion Evaluation - Caustic Collection Tank LVP-TK-00001 (LAW);</p> <p>24590-LAW-3YD-LOP-00001, Rev. 1, System Description for LAW Primary Offgas Process (LOP) and LAW Secondary Offgas/Vessel Vent Process (LVP) Systems (including SDCN 24590-LAW-3YN-LOP-00006).</p>	The Corrosion Evaluation document demonstrates that the tank is designed to process the wastes discussed above. The System Description discusses normal and abnormal operations for the LVP tank. To neutralize the collected acid gases, a 5 molar sodium hydroxide solution is added to the Caustic Collection Tank. A spray jet nozzle is provided for washdown during maintenance periods.
	The waste types are compatible with each other.	<p>Drawings listed above under References;</p> <p>24590-LAW-3YD-LOP-00001, Rev. 1, System Description for LAW Primary Offgas Process (LOP) and LAW Secondary Offgas/Vessel Vent Process (LVP) Systems (including SDCN 24590-LAW-3YN-LOP-00006).</p>	The System Description for the LAW (LVP) does not describe any operations where incompatible wastes are mixed in this tank for processing. The LVP tank receives scrubbing liquid from the Caustic Scrubber (LVP-SCB-00001), located at upper floor (Elev. 48'-0") as shown in drawings and as described in the System Description document. The tank is designed to hold the caustic scrubbing liquid up to 2 days. The collected waste is routinely pumped to the LAW pretreatment facility Alkaline Effluent Tanks (RLD-VSL-00017A/B) via caustic blowdown pumps (LVP-PMP-00002A/B) for further processing.

Information Assessed		Source of Information	Assessment
Corrosion Protection	Tank material and protective coatings ensure the tank structure is adequately protected from the corrosive effects of the waste stream and external environments (expected to not leak or fail for the design life of the system)	Mechanical Data Sheet and Drawings listed above under References; American Petroleum Institute standard, API-650, Welded Steel Tanks for Oil Storage; 24590-LAW-N1D-LVP-00002, Rev. 2, Corrosion Evaluation - Caustic Collection Tank LVP-TK-00001 (LAW).	The Corrosion Evaluation document shows that the LAW Caustic Collection Tank, LVP-VSL-00001 normally operates at atmospheric pressure, a pH of 9 (may be raised to 14), and at a temperature range of 142°F to 149°F. The tank is designed per API-650 standard and for a temperature of 180°F. Other pertinent tank operation and design information is provided in the Mechanical Data Sheet. Washdown of the tank is considered using the internal spray jet nozzle. The material selected is 316 stainless steel and a corrosion allowance of 0.04 in. The LVP tank is located in the LAW facility room L-0218 at Elevation 28'-0" as shown on the drawings. This room has a bermed area surrounding the tank, which in turn drains to the Plant Wash Tank (RLD-VSL-00003) located at lower floor (Elev. 3'-0"). Therefore, the cell should remain dry during normal operations which will limit external corrosion of the tank over the facility's design life.
Corrosion Allowance	Corrosion allowance is adequate for the intended service life of the tank.	Mechanical Data Sheet listed above under References; 24590-LAW-N1D-LVP-00002, Rev. 2, Corrosion Evaluation - Caustic Collection Tank LVP-TK-00001 (LAW); 24590-CM-POA-MVA0-00019-02-00002, Rev. 00C, Design Calculations for LAW Caustic Collection Tank (LVP-TK-00001).	The bases for the LVP tank's material selection and corrosion allowance are furnished in the Corrosion Evaluation document and in the Mechanical Data Sheet. Selection of 316 stainless steel material with a corrosion allowance of 0.04 in. for a service life of 40 years is adequate and appropriate for the intended use of the tank. The Design Calculations appropriately account for the corrosion allowance of 0.04 in. for computing the required thickness of the tank components.
Pressure Relief	Pressure controls (vents and relief valves) are adequately designed to ensure pressure relief if normal operating pressures in the tank are exceeded.	Drawings listed above under References; 24590-LAW-3YD-LOP-00001, Rev. 1, System Description for LAW Primary Offgas Process (LOP) and LAW Secondary Offgas/Vessel Vent Process (LVP) Systems (including SDCN 24590-LAW-3YN-LOP-00006).	The LAW Caustic Collection Tank, LVP-VSL-00001 is provided with an unrestricted overflow through a 4" diameter pipe to the bermed area around the tank and the bermed area in turn drains to the Plant Wash Tank (RLD-VSL-00003) located at lower floor (Elev. 3'-0"), as shown on the drawings and as described in the System Description document. The drawings show that the tank is also vented near the apex of its conical roof to prevent any build up of the gases and/or over pressurization of the tank.



Master Distribution Schedule for WTP Project Subcontract Management Group

Page 1 of 1

SUBMITTAL TRANSMITTAL: <input type="checkbox"/> First Submittal <input type="checkbox"/> Re-Submittal <input type="checkbox"/> QVRP Package <input type="checkbox"/> No Review Required <input type="checkbox"/> No Review Required Re-Submittal <input type="checkbox"/> Submittal Supplement							
CORRESPONDENCE: <input checked="" type="checkbox"/> With Attachment <input type="checkbox"/> W/O Attachment (letter only) <input type="checkbox"/> Fax as Original (Letter Only) <input type="checkbox"/> Fax as Original (With Attachment)							
<input type="checkbox"/> Pre-Award/Award Package <input type="checkbox"/> Executed Change Order Package <input type="checkbox"/> Executed Amendment Package <input type="checkbox"/> Back Charge							
Subcontract Number:		24590-CM-HC4-HXYG-00211					
Subcontract Title:		Tank Integrity Design Assessments by IQRPE					
Subcontractor Name:		AREVA NC, Inc.					
Subcontract Administrator:		Jean Renner					
PDC Document Number		Rev	Document Title				Rev
139508		0	AREVA-07-080 transmitting AREVA-IA-101, Rev. 0 "Structural Integrity Assessment of Low Activity Waste (LAW) Secondary Offgass System (LVP) Caustic Collection Tank (LVP-TK-00001)				0
INCOMING DISTRIBUTION							
Name	MSIN/ E-mail	Original	Copy	Copy of cover sheet / transmittal only	Primary File Index	Alternate File Index	Assigned Action or Remarks
PDC	MS9-A	X		B.8			
Dan Pfluger	MS5-I		x				
			x				
OUTGOING DISTRIBUTION FOR RETURNED STATUSSED STICKER SUBMITTALS							
Name	MSIN/ E-mail	Original	Copy	Copy of cover sheet / transmittal only	Primary File Index	File Index Alternate	Assigned Action or Remarks
PDC	MS9-A	X					